



Sensors

Photo-Induced Emission Analysis to Identify Surface Contaminants

Innovative instrument to identify, quantify, and
characterize contamination, even on irregularly shaped
surfaces

A novel instrument to measure low levels of contamination on curved or irregular shaped surfaces. The instrument offers multiple unique capabilities such as the ability to identify and quantify contamination and analyze multiple surfaces simultaneously. This information provides an analysis of surface cleanliness needed for more reliable adhesive bonding in applications such as light weight aircraft.

BENEFITS

- ➔ Real-time identification and quantification of contaminants, even on irregularly shaped surfaces
- ➔ Rapid analysis of surface cleanliness
- ➔ Measures multiple surfaces simultaneously

APPLICATIONS

- ➔ Manufacturing processes where two surfaces are adhesively bonded
- ➔ Semiconductor manufacturing
- ➔ Aircraft manufacturing
- ➔ Automotive manufacturing

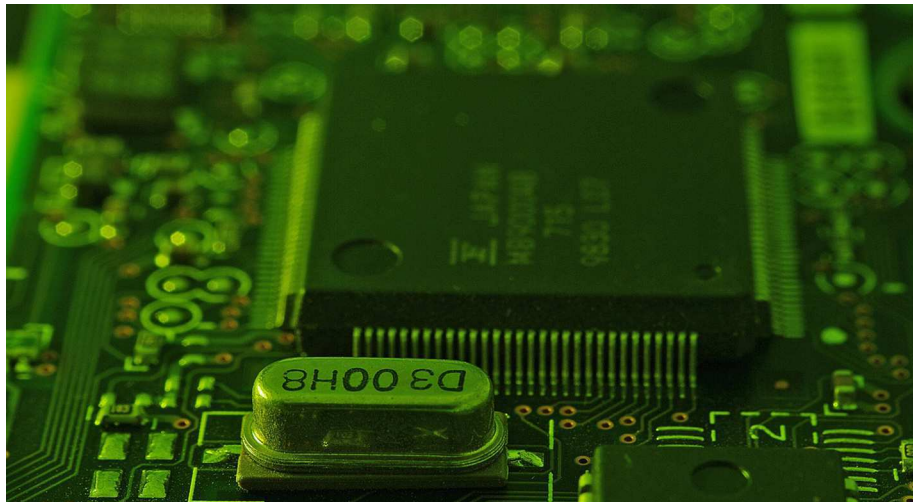
technology solution

NASA Technology Transfer Program

Bringing NASA Technology Down to Earth

THE TECHNOLOGY

This instrument directs UV radiation onto a surface, which produces a small electric current. The instrument then measures that current as it changes over a small time interval. By analyzing the current, the level of contamination on the surface and the identification of the contaminant species can be determined.



This NASA technology could be used by semiconductor manufacturers. Image credit: Pixabay/mikadago

PUBLICATIONS

Patent Pending

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NP-2016-09-2218-HQ

NASA's Technology Transfer Program pursues the widest possible applications of agency technology to benefit US citizens. Through partnerships and licensing agreements with industry, the program ensures that NASA's investments in pioneering research find secondary uses that benefit the economy, create jobs, and improve quality of life.

LAR-18763-1

